

OLDEST BEE PAPER
IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED
IN 1861

DEVOTED TO SCIENTIFIC BEE-CULTURE AND THE PRODUCTION AND SALE OF PURE HONEY.

VOL. XVII.

CHICAGO, ILL., APRIL 13, 1881.

No. 15.

THE AMERICAN
BEE JOURNAL

Published every Wednesday, by

THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR,

974 WEST MADISON ST., CHICAGO, ILL.

TERMS OF SUBSCRIPTION:

WEEKLY—(52 numbers) \$2.00 a year, in advance.
Three or Six Months at the same rate.

SEMI-MONTHLY—The first and third numbers of
each month, at \$1.00 a year, in advance.

MONTHLY—The first number of each month, at
50 cents a year, in advance.

Any person sending a Club of six is entitled
to an extra copy (like the club) which may be sent to
any address desired. Sample copies furnished free.

Remit by money-order, registered letter, ex-
press or bank draft on Chicago or New York, payable
to our order. Such only are at our risk. Checks on
local banks cost us 25 cents for collecting.

Free of postage in the United States and Extra.
Postage to Europe 50 cents extra.

Entered at Chicago post office as second class matter.

CORRESPONDENCE

For the American Bee Journal.

The Clover Experiment.

E. E. HASTY.

The kindly notice of myself in No. 7 of the BEE JOURNAL moves me to give its readers an account of what I am trying to do. It is evident to all on a slight examination that the red clover secretes a large percentage of the honey yielded by the entire flora of the Northern States. It is also evident that the most of it goes to waste, because it lies provokingly just a little further down than the honey bee can possibly reach. Bees work at red clover somewhat as boys work at barrels of molasses, getting a little taste while shut out from the grand supply within. In the direction of getting this immense store of choice honey three different lines of effort are being prosecuted. The first, which will be immediate in its results if successful, is that of Messrs. Jones & Benton, of taming and importing the *Apis dorsata*. For this expensive attempt we owe them a tribute of gratitude, whether they succeed or fail. It seems, however, most likely that this effort will result practically in failure. The *dorsata* is likely to refuse to live in a hive. That difficulty being surmounted, it is still more likely to perish, even in a hive, during a northern winter. Even if successfully wintered, it is still liable to have demerits that will keep it from being of any practical use to us.

Another line of effort is that of developing and crossing our present races of bees with intent to produce a bee with a longer ligula. The right man and a sufficient number of years being given, something could undoubtedly be done in this line. Our bees already reach the bottom of some diminutive clover tubes in the fall of the year; and every improvement would enlarge the number that could be fathomed. Bees also lick some honey from the inner

surface of clover tubes, in which they cannot reach the bottom, and every improvement would enable them to get more. But to get all the honey in the present red clover the length of a bee's ligula would have to be nearly doubled—a practical impossibility, most likely. We may suppose that nature has already developed this organ pretty nearly up to the limit its structure admits of.

One other line of effort remains. The corollas of flowers are among those objects in nature that are most easily modified by human agency. It is probable that we can produce a clover which shall retain the good qualities of the well known farm clover, and differ from it by having a short-tubed flower that

in their tube length. In June the average is about 42-100 of an inch, and the extreme range about from 39 to 50. Late blooms are somewhat shorter. A vigorous plant, with no bad points about it, having flower tubes considerably shorter than the average, must be obtained and seeds gathered from it. The initial difficulty to be surmounted is this: Nearly all the seedlings from this chosen plant will fail to have short tubes like the present; they will have tubes of average or more than average length. Just a few out of many seedlings will more or less resemble the parent in the desired respect. One of these must be chosen to raise seed from, and the process must be repeated many times until the tendency to long-tubed

reached. If we can perfect a clover that will have all its tubes as short as 32 we can no doubt improve the honey bee up to that point. I once held a clover head in my hand, the tubes of which I had filled with syrup, and a bee directly under my eye emptied one to the depth of 32-100. I have four different samples of clover that have yielded some heads with tubes as short or shorter than 32. If, however, we can perfect a clover having a tube-length or not over 24, then all our bees, good, bad and indifferent, can take their fill.

I think that every apiarist, possessed of any taste or talent in that direction, should give a little time and thought to something in the way of improvement for the common cause—some honey plant, or some improvement of the bee, or some new importation, or some improvement of things used in the apiary, or some new method of apiary work. No one can cultivate all the wide fields, but each can cultivate some little nook or corner. Inside the apiary I choose the native brown bee for my corner. I really don't think he has had a fair chance as yet, and so I incline to let others attend to the imported races. It surely cannot do any harm to the cause to try the effect of a little good breeding on all the races of bees that come to hand.

Richards, O.

For the American Bee Journal.

Stingless Bees—Meliponas, Etc.

DR. WM. E. HOWARD.

The *Meliponas*, according to Mr. F. Smith, in a paper on Brazilian honey bees, read before the Entomological Society of London, March, 1863, "are insects having wings shorter than the abdomen, the latter being convex and oblong; their mandibles never being denate; while the *Trigonas* have the wings more ample, and longer than the abdomen, which is short and somewhat triangular, while the mandibles are serrated, denticulate, or sometimes edentate. The *Meliponas* are restricted to the new world, while *Trigona* extends into Africa, India and Australasia." "Gardner, in his travels, gives a list of such species (of *Melipona*) as he met in the provinces of Piahy and Goyaz, where he found them numerous; in every house he says, 'you find the honey of these bees;' many species, he tells us, build in the hollow trunks of trees, others in banks; some suspend their nests from branches of trees, whilst one species constructs its nest of clay, it being of large size. The honey, he says, of this species is very good." (Smith.) "M. Guerin found six females in a nest of *Melipona fulvipes*."

In a nest of *Trigona carbonaria* from Eastern Australia, Smith, of the British Museum, found from 400 to 500 dead workers crammed in the spaces between the combs, but he did not find a single female among them; the combs are arranged precisely similar to those of a common wasp. The number of honey-pots, which are placed at the foot of the nest, amounted to 250. Hill states in Gosse's Naturalistic Sojourn in Jamaica, "that the wax of these bees is very unctuous and dark colored, but susceptible of being whitened by



Liriodendron tulipifera—often called Poplar, in the South.

the bees can reach the bottom of. I do not know whether I was the first to suggest this plan or not. My first printed article on the subject was published in the August number of *Gleanings* for 1879. I had, the previous June, spent considerable time in selecting clovers in the fields, and had transplanted to the garden most of the ten samples that form the basis of my present kinds. It matters but little, however, who was the first to move in the matter; the idea has now spread abroad among the bee-keepers in both continents, and there is a fair prospect that some substantial results will follow.

As to the mode of operating, the first thing is to obtain a plant, or plants, to start from. Clovers vary considerably

flowers is bred out. From the most tractable sample I now have, most of the seedlings produced tubes perceptibly shorter than the average last summer. This is as far ahead as I have got yet in the long but interesting task. The plant of this sample chosen for the parent of the next generation had a tube length of about 36—not quite so short as the original plant, to be sure, but some hundredths should be allowed for the difference of circumstances. The original was half choked and starved by weeds and a poor soil, while this is very luxuriant. While breeding out the tendency to long tubes, from time to time little positive gain can be hoped for among the choicest seedlings. These must be held and bred into permanence, as at first, until the desired length is

bleaching. The honey is stored in clusters of cups, about the size of pigeons' eggs, at the bottom of the hive and always from the brood cells. The brood cells are hexagonal; they are not deep, and the young ones when ready to burst from their casement, just fill the whole cavity. The mother bee is lighter in color than the other bee, and elongated at the abdomen to double their length." Smith also states that the female of this genus has the abdomen greatly distended, reminding one of the gravid female of the white ant.

The *Meliponas* were known to Huber, who experimented with them and made drawings of their cells.

From the above it will be noticed that the proposition to send queens to the members of the "Stingless Bee Association of America," that should the valuable queens arrive safely, they would certainly be somewhat like the negro's banjo without strings. They could not be introduced in with our common hive bee any more than you could a bumble bee into a hornet's nest, and besides, if the bees were sent in full colonies the honey, as Mr. Langstroth suggests, would be so far from the brood nest that they never could reach it; and were this not the case we never could make the management of them anything like successful or satisfactory; and while right here let me quote an article from the *British Bee Journal* on the subject of *Trigonas*, referred to by a correspondent of the *Guide*: "Although *Trigonas* cannot sting, an apiarist would be compelled to beat a hasty retreat if he should attempt to meddle with their nest." (Hives you see are dispensed with). "For such an offense the little fellows will make a terrible attack on any person, and in an instant the hair and clothes of the attacking party are filled with an offensive squeaking. They cut off his hair." The correspondent further remarks that, "this thing might be tolerated by lady apiarists that possess an extra 'switch' or two, but for those who can hardly afford a wig at all, it would be a little expensive unless the price of wigs should decline. Perhaps the importation of this variety of bees might prove a great aid to the barbers, to help them in 'peeling.' As these bees do not use wax, but mud or resin, a new industry might arise in connection with the manufacturing of tile, viz: the making of honey cells for the said *Trigonas* to fill with honey."

Kingston, Tex., March 11, 1881.

For the American Bee Journal.

Have we a Reliable Test for Honey?

L. JAMES.

About a year since I purchased a quart of glucose syrup, knowing it to be such, to try it for household use. As we did not like it, the fruit-jar containing it was set on a shelf in the pantry exposed to a bright light, yet not to the direct rays of the sun. Sometime during the past winter I had occasion to use some extracted honey, and going to the pantry to get it I mistook the jar containing the syrup for candied honey; but on attempting to get it from the jar, a waxy or taffy-like adhesiveness quite different from that of honey in a like condition excited my surprise at its adhesiveness, and to settle the question I was induced to appeal to the sense of taste to assist in deciding the matter. This did not recognize it as honey, and upon inspection the eye readily detected the lack of granulation noticeable in honey, but in its place a waxy or salve-like appearance. When purchased it was of a beautiful color and rather pleasant taste, but now, after having assumed a taffy-like appearance, it has lost its pleasant taste and assumed one quite different with apparently little sweet in it, as if it stood in need of honey or sugar to help it go down.

Having read the proceedings of the Northeastern Convention, on page 70 of the *BEE JOURNAL*, current volume, I find that body adopted Mr. Root's resolution, that all liquid honey will granulate, candy, or become hard at the approach of cold weather, and that this quality is a sure indication of its purity, etc. Having this sample of corn syrup

(or glucose as I suppose it to be) before me, I recognize in it an article that if mixed with honey, would not in all probability offer any impediment to the hardening process in pure honey. A trial of the mixture of the stuff with honey would alone be the true test as to this point. Heretofore I have recognized in the above standard a correct test of purity in honey; but this stuff sold at a high price as the best silver drips, or some other kind of drips, causes me to call in question our reliance on the above test as an infallible one.

I send by express a sample of this syrup for your inspection, and if it is not exposed to sufficient warmth to liquify it, I think you will agree with me that it will require a good eye and an expert to detect the adulteration.

Atlanta, Ill., March 3, 1881.

[The sample received is quite nauseating in smell, but in skillful hands could be manipulated with honey to a degree of perfection well calculated to deceive any but an expert.—Ed.]

For the American Bee Journal.

Side-Storing for Surplus Honey.

G. M. DOOLITTLE.

As intimated in the last number of the *BEE JOURNAL*, I will resume my friendly talk with Mr. Heddon. He says in the *Weekly BEE JOURNAL*, on page 33, Feb. 2d: "To me, an argument in favor of side-storing is an admission that the shape or construction of the hive of the advocate is faulty." I take it he cannot mean exclusive side-storing, for I know of no such hive, or any person advocating such a hive. From the expression, "I prefer a top-storing *hive exclusively*," I understand that he means that "an argument in favor of a hive which admits of both side and top boxes, like Quinby's, Betsinger's, Doolittle's, etc., is an admission that the shape or construction is faulty." If I am correct, Mr. Heddon uses the "tiering-up" plan in working for box honey; i. e., as soon as the first set of boxes are two-thirds full, they are raised up so as to take a second set between those partly filled and the brood chamber below. I hardly think he would recommend but a single tier of sections on top of each hive, for in such a case a strong colony of bees would not have room enough to work to advantage.

Well, I do not know that I can prove to him that he is making a great mistake in using and advocating "top-storing *exclusively*," in any better way than to give my experience, and the causes which led me to believe right contrary to what he does. The year 1870 was the first really good honey season that we enjoyed after commencing bee-keeping. At that time we used the Langstroth frame and practiced the tiering-up process. At the end of the season we found we had taken from our best colony in the apiary, 140 lbs. of box honey. This I thought a large yield, till I found that Mr. Betsinger had gone considerably ahead of it with side-storing hives. Two poorish seasons followed, during which Mr. B. nearly doubled us in quantity of honey per colony, and in 1873 we made a few side-storing hives to test the matter. Although we found we had over-reached the mark by putting too many boxes at the sides, still we could see an advantage in favor of side and top-storing combined, for the reason that our bees would build comb much faster at the side than on top, while they would store honey much more rapidly on top than at the sides. Thus we were not slow to learn that if we wished to secure a good yield from our bees, we were to raise the sections built full of combs (or nearly so) at the sides, to the top, as fast as full boxes of honey were taken from the top, and placing our empty sections at the sides every time. Thus we worked till 1877, using top and side-storing combined, and the tiering-up process, about equally. At the close of the season of 1877, we found that 185 lbs. was the best done by any of our colonies which had been worked on the tiering-up plan, while of those worked on the side-storing we found that three, collectively had given us the large amount of 896 lbs.—

one producing 300, another 301, and the third 288, while our whole lot of side-storing hives gave an average of over 200 lbs. each. This was a clincher in favor of side-storing, and, in his language on page 66 of the *Weekly BEE JOURNAL*, "I was not prejudiced in its favor because I adopted it," but "I adopted it because I was prejudiced in its favor," and to-day all tiering-up appliances are out of date in our apiary. Candidly, did Mr. Heddon ever, without partiality, try the combined plan of side and top-storing? If he has, I can but wonder at his words first quoted in this article. If not, they show his expression was a little premature.

I see Mr. Heddon has adopted 8 Langstroth frames as his standard as regards the number that should be used in a hive. We have adopted 9 Gallup frames, which is about the same as 7 Langstroth frames, and if I was using the Langstroth hive, 7 frames would be all that I would use, for this reason: If we wish to make a success of producing box honey, the frames in the brood apartment must be full of brood (not honey nor empty comb) at the time the honey harvest commences; if not, the first storing will be done in the space unoccupied with brood, instead of the bees going immediately into the boxes, and I have found by experience that if there is room in the brood chamber for the bees to store from 6 to 10 lbs. of the first honey gathered, they are very loth to enter the boxes, thus crowding out the queen with honey, for they will keep crowding her to more or less extent, if such conditions are present, to the end of the harvest. But let them have every available cell full of brood, and the first honey gathered will go into the boxes, thus inciting an ambition to store in the boxes rather than in the brood chamber. I do not wonder that Mr. Porter (see page 73 of the *BEE JOURNAL*) failed with "Doolittle's plan," as we see he used 10 Langstroth frames. If 10 Langstroth frames are used (as a rule) the two outside frames will be filled with honey, and bees will not travel over a sealed frame of honey to go into boxes at the sides while those on top come close to the brood in the center of the hive, at the top of the frames; but let the brood come as close to the side boxes as it does to those on top, and our experience is they will enter the side boxes first, unless coaxed into the top boxes with full sections of empty comb, as we always do.

In the next *Weekly BEE JOURNAL* I will give my experience with separators. Borodino, N. Y., March 29, 1881.

For the American Bee Journal.

The Discharge of Feces in the Hive.

A. A. BALDWIN.

To the question, "Do bees willingly discharge their feces in the hive?" I say, no! A number of apiarists claim that during the confinement of winter they discharge their feces in a dry state or form. Now if this is so, they must be endowed with reason to decide whether they are in a perfectly healthy condition or not. Every apiarist knows that bees when affected with dysentery are very loth to discharge their excrement in the hive, choosing, rather, to leave the hive, even amid the piercing winds of winter. We have many demonstrations of this fact in almost every apiary after this long cold winter. We find some colonies quite badly distended as they come out for their first flight, but on looking into the hive find the combs clean. Now if it was natural for them to discharge their feces in their hives we should not have a clean hive or comb after such a long confinement as they have had in many sections of the country this winter. It is evident that cold and moisture are the two main causes of dysentery among bees; too much dampness, either in their food or in the atmosphere which surrounds them. My experience is that bees will endure a confinement of 5 months or longer and come out in good condition if all things are favorable. I had my bees in the cellar one winter, 5 months and 8 days, and they came out in good condition and did well the next season. Let us talk up the subject of absorbents. Sherman, N. Y., April 5, 1881.



North-Eastern Wisconsin.

At the North-Eastern Wisconsin Bee-Keepers' Association, held at Oshkosh, the following topics were discussed:

Different Races of Bees.

Mr. Winslow. I decidedly prefer Italian bees, the purer the better.

Mr. Potter. I prefer Italian bees, decidedly; they protect themselves much better. I have 180 colonies and got 1,500 lbs. surplus.

G. S. Church. I have only black bees; I have kept them for 20 years.

Geo. T. Sanford. I found less difficulty in wintering black bees.

M. A. Gill. I have no choice as to race, but consider as superior those of any race that are vigorous and have ragged wings, which denote hardness and longevity and that bear their loads to the hive entrance without lagging.

Conrad Dippel. I certainly prefer Italian bees on account of gentleness.

C. Grimm. I keep black, Italian and hybrid bees.

Jacob Childs. My 20 years experience gives preference to Italian bees. On a scale of 7 they mark 7 on swarming; 6 for docility and gentleness, and 6 for beauty.

John Dickinson. I have had no experience with black bees. Hybrids begin work more readily in sections, the leather-colored Italians coming next. As to industry and general working qualities, Italians have given proof of their superiority. Hybrids come out stronger in the spring and get through a cold winter better, but Italian bees build up more rapidly.

Best Method of Wintering Bees.

John Hodgson. I tried different ways each year for 8 years and decided the cellar the best. It should be built on a side hill and kept at a temperature of 35° with a pipe to carry off foul air.

Mr. Potter. I favor the cellar. I have tried chaff hives and have lost all. I have 90 colonies in a room 14x22; have no trouble with mice; put chaff over the hives.

Fred Badger. I have wintered bees in Iowa, never here till now. My bees are now standing out and in good condition. I use chaff boxes 6 inches deep over the frames.

Mr. Potter. Bees will stand temperature at 45° and live.

Fred Brooks. My brother found a bee-tree a week ago and found the bees very lively.

Mr. Winslow. I keep my bees entirely on summer stands packed in wheat chaff and burlaps. I have had unsatisfactory experience with cellars.

L. Fatzinger. My bees invariably succeed best in the cellar.

D. Abott. After various experiences I prefer the cellar, with a temperature of 35° to 40°, with ventilation from without and up.

Jacob Childs. I never tried anything except out-door wintering packed in chaff—oat, wheat and buckwheat—with equal success.

Christopher Grimm. I favor cellar wintering.

Conrad Dippel. I favor chaff hives on summer stands.

Geo. T. Sanford. I favor chaff hives.

M. A. Gill. I maintain that north of parallel 40, a cellar if perfectly pure and dry, and all light excluded, is preferable.

John Dickinson. I winter $\frac{3}{4}$ in the cellar and $\frac{1}{4}$ out-doors packed in pine sawdust or chaff. Those out-doors are placed with backs to a terraced wall and covered with factory cloth and straw and old hay. In this way they winter rather better than in the cellar.

C. J. Hennings. The best method of wintering bees is to bury them.

Is Upward Ventilation Necessary in Winter?

Mr. Potter. I use upward ventilation.

C. J. Hennings. Give them ventilation at one end on the lower part and at the other end upwards.

M. A. Gill. In cellars upward ventilation more than a quilt would give is

needless, but on summer stands direct upward ventilation is necessary.

Geo. T. Sanford. Answers yes. Conrad Dippel. Upward ventilation is needed, and as much as 4 inches of chaff will allow.

C. Grimm. It is necessary in cellars but not out doors.

Jacob Childs. I consider upward ventilation quite necessary, but let it be through 10 inches of chaff, and burlap between the bees and chaff.

L. Fatzinger. I think it necessary if done without a draught through the hive.

Mr. Winslow. In chaff, only such upward ventilation as will go through light chaff and burlap.

John Dickinson. I have tried it with and without ventilation and find no particular difference.

Amount of Food Bees Consume in Winter.

It was generally conceded that it depended all on the length and severity of the winters, place of keeping, etc. No one seemed to have weighed their hives both fall and spring to ascertain with exactness. Some thought 25 lbs. was none too much, while others thought they had wintered swarms on as low as 10 or 15 lbs.

Mistakes of and Hints to Beginners.

The sentiments expressed are about all one way—go slow and do not increase too rapidly. Some of the individual expressions were as follows:

Mr. Potter. Beginners increase too much. They should keep their bees strong; they should never keep more than 5 colonies the first year and 10 the second.

Mr. Gill. Beginners make mistakes in getting too many bees before acquiring thorough knowledge of them, and too rapid increase leads to disaster. They should commence with 2 or 3 colonies—never more—adopt some standard hive and study the bee periodicals.

Jacob Childs. If you would succeed go to some practical and successful bee-keeper and learn the trade.

Conrad Dippel. The principal mistake is in dividing too often or letting them swarm as often as they please. Beginners should never depend on bees and honey alone for a living.

C. Grimm. Do not invest much at the beginning.

Wintering on Grape Sugar.

Mr. Hodgson. I fed 5 colonies on grape sugar last winter and lost 4 of them. Will never try it again.

Conrad Dippel. I do not feed, touch nor handle it; I am entirely averse to it. C. J. Hennings. I never had success with grape sugar.

John Dickinson. I tried it thoroughly with bees in the cellar, but had to take it out by Christmas. One colony of bees was dead and the rest were in a bad condition. I dread grape sugar and will let it alone.

Best Method of Swarming for Wisconsin.

Mr. Potter. This is a fine point. The past season artificial swarming would ruin colonies and to rely on natural swarming would give no increase. If you rely on natural swarming you must have your colonies very strong early so that they will swarm by the 14th of June. I recommend natural swarming.

Mr. Church. I do not like to let them increase at all, but practice both natural and artificial swarming. I move natural swarms as soon as hived to the place where they are to stand.

Fred Badger. I use a mullen stalk tied on a pole, and in every instance the swarms would cluster upon it.

Mr. Winslow gave an instance where a bee-keeper he knows uses a long pole with a wad on the end covered with black alpaca, resembling the color of bees, and catches swarms every time.

Mr. Potter. I sometimes clip the queen's wings and when she comes out I catch her. When the swarm is out I replace the old hive with a new one and turn in the queen loose, when the swarm will return to the new hive.

Mr. Haight. I do not approve of clipping queen's wings and do not practice it any more. Could not work it with a large number of colonies.

Conrad Dippel. In Wisconsin I find dividing the best and most easy method of increasing the number of swarms.

C. Grimm. I favor natural swarming, but if rapid increase is desired, dividing should be practiced.

Mr. Gill. For the specialist natural swarming is preferable, but for those engaged in joint business—farming and bee-keeping—dividing is the most desirable.

L. Fatzinger. The best way is to let them swarm once, then cut out the queen cells and introduce a laying queen.

John Dickinson. I could not stand natural swarming in an apiary of 100 colonies or more. Too much trouble. I believe that bees do work just as well when properly divided as when allowed to swarm naturally.

C. J. Hennings. I believe it best to let them swarm once, in Wisconsin.

Jacob Childs. Either way is good, according to circumstances, which must be determined by judgment.

Geo. T. Sanford. I prefer natural swarming.

When to Divide Colonies.

Mr. Potter. If bees are strong and old combs plenty divide as soon as the clover yields; if they have only honey, divide in May.

Mr. Winslow. I find second crop of white clover valuable.

Mr. Green. I divide as soon as bees are strong enough. I get most of my honey in the fall.

Mr. Gibbons. I divided both ways and found those divided after clover season did the best.

Conrad Dippel. I consider the best time after clover season and before linden blossoms.

C. Grimm. If the colonies are strong divide before, if weak, after clover season.

Geo. T. Sanford. Before, if strong enough.

Mr. Gill. I would advise dividing only in exceptional cases before clover seasons.

M. Mahin writes: If increase of stock is desired without regard to quantity of surplus honey, divide at the beginning of the white clover season; if a larger amount of honey is desired with a moderate increase, divide after clover season. If the largest amount of honey possible is desired and no increase, don't divide at all.

Does it Pay to Melt Old Combs and Use Foundation?

Mr. Potter. Not if the comb is whole and straight.

Mr. Green. I had the best success with new foundation.

Conrad Dippel. Comb foundation is indispensable. I give it to new and old colonies after dividing.

Mr. Gill. Not necessary with straight worker combs.

L. Fatzinger. If clean, straight comb save it; otherwise melt.

John Dickinson. It decidedly pays to do it with present price of wax and foundation, even without a machine.

C. J. Hennings. It does pay.

Mr. Sanford. I think it does.

Mr. Grimm. It does, if combs are very old and part drone cells.

R. A. Morgan says it does, and gives practical tests in support of it.

Division Boards and Surplus Honey.

All agree that they are useful early in the season, and may be used in the upper story to induce bees to work more readily, and in the lower to increase breeding by keeping the bees warmer.

Is the Basswood in this State Killed?

Few of those present had any knowledge on the subject, and the letters received varied somewhat, some thinking not and others deploring the rapid destruction of basswood. Several communications urged bee-keepers to set out linden trees and have them properly guarded and fenced in.

The North Eastern Bee-Keepers' Convention all through has been somewhat informal, although considerable interest was manifested by the few in attendance. Tuesday afternoon the following officers were elected:

President, Geo. S. Church, Neenah; Secretary and Treasurer, Mrs. Frances Dunham, Depere; Vice-Presidents, L. H. Pammel, LaCrosse; John Hodgson, Pewaukee; C. H. Green, Berlin; A. Potter, Eureka, and H. P. Sayles, Hartford.

A resolution was passed to hold the next meeting in Berlin on the second Tuesday and Wednesday in October, but at the evening session this resolution was reconsidered and the place fixed for Pewaukee, at the same time mentioned.

Read before the N. E. Convention.

Wintering Bees Successfully.

L. M. WAINWRIGHT.

Heat and electricity are the staple, vital forces of life in animal organization. Combine all the other favorable circumstances that a smiling Controller of the universe could bring about, in absence of the great forces, and all is wrapped in the chilly sable mantle of an eternal sleep. Could it be that nature should be clothed in her mantle of grandeur, watered by the silvery sprays of the welcome clouds, with the rainbow's glories seen through the misty vapor, and the sun alternately shining in his glory, yet with the earth's normal condition of heat and electricity absent, the cold, icy arms of death would chill all the pulsations of life, and cause everything to sleep quietly in the stilly shades of universal night.

Before late autumn's and early winter's chilly winds scatter the hoary frosts, all colonies should be prepared for winter under the genial rays of an October's sun.

How to Prepare for Winter.

Remove the top story of the hive, take off all surplus honey boxes and remove the outside combs from the brood chamber, leaving in the center of the hive only enough well-filled combs to carry the bees safely through until spring. Place the lids on the brood chambers, and they are ready to wheel into winter quarters as soon as the proper time comes, which varies with latitude; but in Central Illinois, as a rule, about the middle of November.

Winter Repository.

It may consist of a dry, underground cellar, a cave in a hillside, or a frost-proof building on top of the ground; but as the style of the repository is no part of the discussion, we leave this part of the subject for others to decide.

Cleansing the Repository.

If the building is infected with mice, trap them all a month or so in advance of putting up the bees, and a few days before the bees are housed burn a suitable amount of sulphur in the room to destroy all accumulations of fungi, then with a suitable brush wash the walls with a weak solution of carbolic acid and water, after which leave the house open until all is sweet and pure.

Storing in Winter Quarters.

Select a nice cool day or evening about the middle of November, soon after the bees have had a purifying flight. Close up the entrances of the hives, and place 1 or 2—or as many as as you are prepared to wheel—on a spring wheelbarrow, if you have it, if not, a common one will do, running it on a smooth track. Wheel directly into the repository, and stack your hives one upon another as high as you can lift them, always being careful as you stack them to raise each lid $\frac{1}{2}$ inch above the lid a suitable number of $\frac{1}{2}$ inch pieces prepared for the purpose. Avoid placing the hives against the walls of the building, as this might produce a concussion among the bees from an outside jar of the building.

Winter Management.

After the bees are properly adjusted in the house for the winter, 3 things are to be considered. First: A proper temperature of the atmosphere. Second: Plenty of fresh air. Third: A humid condition of the atmosphere.

(1.) The mercury should show a higher or lower temperature in proportion to the strength of the colonies housed. If the colonies are very strong, 40° Fahr. is about right. Medium colonies, from 45° to 50°. But if very weak, or nuclei with queens, about 60° is necessary to keep the bees in a good, healthy condition. Colonies should be

graded according to strength, and placed in repositories adapted to their wants.

Sometimes when bees begin to leave their hives and plunge into the dark abyss before them, "never, never" to return to their once happy homes, we are liable to attribute the whole excitement to too high a temperature, while the facts are that the atmosphere is too dry, and the bees thirsty after a long confinement.

(2.) Bees, like animals of a higher organism that live and bask in the great ocean and sea of atmosphere—which alike in all places enshroud the globe, imparting life, vigor and health—should have plenty of fresh air. True, bees can live in an atmosphere so foul, and breathed over and over so frequently that a human being would soon die in it. But this is no argument in favor of wintering bees in a room filled with impure air. Air should be admitted through a subterranean air duct. If 15 or 20 rods long, and passing through a 6-inch tile, the air will enter the room at 40°, while the mercury stands at zero in the open air.

(3.) A humid condition of the atmosphere may be kept up by placing vessels of water in the room; but bees do not particularly want water before sometime in January, especially if the honey is thin.

Should very warm weather occur at any time in the winter, the mercury rising to 60° day and night in the open air, no one should take fright and rush their bees out doors, probably to be frozen in a very short time. In proportion as the thermometer in the room rises above a proper temperature, increase the surface of the water pools in the house, and throw all the doors open at nights, and the result will be the same as produced in a damp atmosphere in the spring, with a temperature of 60°.

Combs will not grow moldy inside of 4 months in a damp atmosphere, if in a well ventilated hive filled with a good colony of bees, and the house properly warmed. Combs will grow moldy when a hive has no upward ventilation and the room is cold, but more especially if the swarm is small, even if there is no water in the room. It is a cold atmosphere that kills bees and molds combs in a house. The vapor exhaled from the bees not only settles on the outside of the combs, but after a time finds its way into the cells and lodges in small drops against the septum of the cells and creates a heavy fungi in a short time.

How Long Should Bees be Housed?

As a rule they should be kept in until they can gather some pollen from the soft maple and willows. It is not the length of time that bees are confined that stupefies and kills them, but the unfavorable circumstances under which they are confined. Where they are kept warm and in a room with a moist atmosphere (but otherwise dry), and have plenty of fresh air, they never eat more than the system requires to supply the loss that is continually going on in animal life; and when brought out after 4 months' confinement, they are as perfect as when winter overtook them.

When they are old before housing, they will die in the spring before young bees in sufficient numbers can take their place to sustain the "old homestead." We call this spring dwindling. Other unfavorable causes will produce like results.

I will not argue the question of repository wintering, as it is vastly better in a cold climate. As the "Sunny South" always enjoys the blushing smiles and genial rays of a warm sun, the bees will care for themselves in such a climate. Not so in the North, where the mercury falls to 25° or 30° below zero, and remains down so long that they cannot take wing for 6 or 8 weeks. They will generally perish and become unhealthy if on their summer stands. Chaff packing in ordinary winters will keep up a very good temperature outdoors; but alas! when it sinks 30° below zero, and the winds are sweeping over hill and dale like a mighty tornado, winter's icy breath severs the tender cord, and life gives place to the still reign of death.

Noblesville, Ind.



THOMAS C. NEWMAN.
EDITOR AND PROPRIETOR.

CHICAGO, ILL., APRIL 13, 1881.

In Bohemia, Austria, the Society has changed its name to "The Austrian Society of Bee Friends," and has elected Herr R. Mayerhoeffer its President, who in a recent letter says: "I am surprised that you can publish the BEE JOURNAL as a Weekly—such a thing is only possible in America. I wish you the best of success."

The Indiana Farmer says that the annual report of the Bureau of Statistics, just out, places the number of colonies of bees in the State at 146,327, and the number of lbs. of honey taken, 1,197,627, or 8.18 lbs. per colony. This report is for the honey crop of 1879, which was a very poor season, the estimated yield being only half a crop. Lawrence county reports the largest number of colonies, 7,168. Allen county next, with 4,114. Crawford county the least, only 142 being reported. In production Lake county stands at the head with 59,984 lbs.

A disgusting discovery was recently made near Birmingham, England. The Mark Lane Express of March 7, says:

"The Inspector found in the 'manufactory' the steam machinery in operation, and about 1,300 lbs. of diseased horseflesh, mutton, etc., in various stages, from the 'raw material' to the 'finished' potted meat, sausages, save-logs, 'savory ducks,' German polonies, etc. There were nearly 200 lbs. of sausages recently made, and colored with red ochre to give them a fresh appearance; 2 diseased sheep, 200 lbs. diseased horseflesh, and cans of potted meat, being mostly diseased horseflesh."....

Uniting Colonies in Early Spring.

Will you please to tell me, through the BEE JOURNAL, how to put 2 colonies of bees together and manage them so they will not fight?

Mrs. H. THOMPSON.
Vermontville, Mich.

Cook's Manual, page 253, recommends spraying and smoking for successfully uniting in summer and fall; but in quite early spring there is some danger of chilling brood, if the operation is performed by unskilled hands. We think the following will be the best plan for early weather: Remove the queen from one colony and put the frames with bees and brood at one side, putting in a divider made by tacking wire-cloth on one side of a brood frame, with the ends extending to reach full length of the hive; now bring the brood, queen and bees from the other hive and place in this one, close the entrance on the bees and queen, put in for 24 hours, slant a board in front, remove the hive vacated, and the work is done. In 24 hours, or the next night, remove the obstruction from the entrance, leaving the slanting board in front, which will cause the bees to mark their home anew. On the third day remove the dividing-frame and the board from the front. No hive should occupy the old stand, from which the queen and bees were removed, for several days.

Conventions, and their Mission.

I have been thinking of the real solid visits and enthusiastic discussions we have at our Conventions. In these discussions we get not only the latest and best thoughts of the participants, but inspired thoughts—truths told with masks off. Prof. Cook says enthusiasm is the main source of successful honey-producing, and much more is the success of a bee-keepers' Convention. But our Conventions are universally marred by long and tedious essays. Just as the meeting has reached a degree of warmth that is inspiring, the Secretary hauls out a long essay (may be a "prize essay"), and reads, and reads, till the glow of the members is charred to coal. At its close every attendant feels tired and like a man in a wet blanket. D. sighs, M. draws a long breath, B. yawns, and then all hitch in their seats, and a sickly silence comes over the scene. But soon the next topic is taken up, and a new enthusiasm kindled, which is destined to the same fate. It seems to me that the offering of "prizes" for these essays to promote and encourage Conventions, is like paying a premium on murder to promote morality. Is there any argument in their favor that is not answered by saying, "Send them to the JOURNAL as correspondence?"

At our meetings we are never at a loss for interesting topics, but for the time to discuss all that we can feel are of importance to us. Those who are in attendance have borne the expenses, and have a right to the time over the essayist. A short letter of greeting, and now-and-then a topic suggested by an absent member, would not be so bad. Do you not know that what I have stated above is true, from your experience at Conventions?

Topics should be suggested and published some days before the meeting, and each member or proposed attendant should prepare himself to speak on the subject, by revolving it over in his mind. Of course, we are not orators; but neither are we essayists. While some of us are not gifted at theorizing and drawing deductions, all can tell their experience in some shape, and what is of more value? Experience is the foundation of the whole fabric.

District Conventions are what we need. Good reporters are next in order. We want a report that is condensed in words, but not in thought. A man to fill that office must possess a knowledge of the topic under discussion, and a superior power of handling words.

The bee-keepers of our Congressional District, embracing this southwest corner of Michigan, are now taking steps for an organization, and although I am so busy that I cannot help it along as much as I would like to, yet I will do all I can, and hope we may soon be organized permanently. I believe I prophesied such local Conventions some years ago. JAMES HEDDON.
Dowagiac, Mich., March 23, 1881.

We must take occasion to thank Mr. Heddon for broaching this subject in his terse, happy manner. It must have occurred to every reader of the BEE JOURNAL, as it has frequently appeared to those in attendance at the Conventions, that some of the essays were long and prosy, and frequently two or more upon the same subject; while the essayists themselves must have felt the necessity for prolixity, in order to meet supposed arguments which might be opposed against theories advanced. It frequently happens that much valuable time is occupied in this way, that would have been saved had the writer been present, and many records perpetuated which had been better forgotten.

We should not forget, however, that many discoveries are being made, many exceptions to acknowledged rules frequently occurring, and apparent contradictions of theories arising. These should be brought before the Convention for discussion. Some one present can probably explain a seeming mystery

in a few words; others may profit by their experience.

Mr. Heddon is correct in his estimate of the value of good district Conventions. They harmonize what would otherwise be competing interests; they foster a fraternal feeling; they encourage an emulative spirit of superiority, and elevate the nobler instincts of humanity.

The Secretary might be chosen with especial reference to his apicultural knowledge and reportorial qualifications. Promptness in making out his report, if intended for publication, is quite as essential as promptness in attending to any other business entrusted to him. The reports of a conventional body lose much of their interest to the members in attendance if not published promptly, and an editor feels much reluctance in giving his readers a stale report, when, perhaps, his correspondence files are crowded with communications of recent date.

By all means, organize district societies and call Conventions, then let every bee-keeper within their circuit make an effort to attend. If one bee-keeper is more successful than another, he is under a moral obligation to attend his Convention and instruct his co-workers; if he is less successful than they, he is under a pecuniary obligation to himself to attend and be educated. Leave all personal differences to be settled outside the Convention, and all work with a zeal to make it a pleasant, successful and profitable gathering.

Wisconsin Law against Adulteration.

Mr. F. Wilcox has sent us the following questions:

I append hereto a copy of our law in relation to the adulteration of food. What do you think of it; can it be enforced?

Bees that are being wintered on the summer stands are in very bad condition (mostly dead), unless well protected. Those in cellars are in good condition, but need a flight soon. The weather is very cold yet, and little or no bare ground. We must wait another month before we can accurately tell how bees have wintered.

Mauston, Wis., April 2, 1881.

CHAPTER 40.

AN ACT in relation to the adulteration of food.

The people of the State of Wisconsin, represented in Senate and Assembly, do enact as follows:

Section 1. Every person, company or corporation who shall manufacture, sell or offer for sale any article in imitation of butter which has been manufactured wholly or in part from tallow, shall mark each firkin, tub, package or parcel, on top of same, in letters of not less than one-half inch in length, and breadth in proportion, and in such manner that it may be plainly seen, the word "oleomargarine." If made wholly or partially from lard, each firkin, tub, parcel or package shall be marked "butterine" in large letters, as above required.

Sec. 2. Every person, company or corporation who shall sell, or offer for sale, honey, or any imitation of honey which is adulterated with glucose, or any other substance, shall mark the package or parcel with the words "adulterated honey," as required by section one of this act.

Sec. 3. Any person, company or corporation that manufactures or offers for sale cheese that has been made in part of oleomargarine, or where anti-huff or any other substance has been used to adulterate the same, shall mark each cheese as required by section one of this act, with the name of the article or articles used in adulterating the same.

Sec. 4. Any person found guilty of any violation of this act shall for each of

fense be punished by imprisonment in the county jail, not less than ten days nor more than six months, or by a fine of not less than ten dollars nor more than one hundred dollars, or both, in the discretion of the court.

Sec. 5. One-half of all fines imposed by the enforcement of this act shall be paid to the person who informs against and prosecutes such offender to conviction.

Sec. 6. All acts or parts of acts conflicting with the provisions of this act are hereby repealed.

Sec. 7. This act shall take effect and be in force from and after its passage and publication.

Approved March 3, 1881.

Another dead-letter, we fear. It is not made the especial duty of any officer to prosecute offenders, nor is the tribunal designated which shall have cognizance in such cases. Again, there is a fatal omission of the nature of testimony which shall be required to secure conviction, and statutory as well as common law pre-supposes every offender to be innocent until proven guilty. As in Kentucky, the real difficulty will be to prove the existence of the fraud to the satisfaction of the jury.

But we are glad to see that the law has passed, even though it should prove inoperative. It is a strong evidence that the people are awakening from their lethargy and demanding reform. The abuses are so great that it seems difficult to check them, but the next legislature can amend the law to make it effective, if the honest producers and consumers combine in requiring it.

The National Convention.

We have received for publication the following letter from the President of the North American Bee-Keepers' Society, in reply to Prof. Cook's open letter published in the Weekly BEE JOURNAL of March 23d, page 92:

Smith's Grove, Ky., April 1, 1881.

PROF. A. J. COOK: Dear Sir: I have read with much interest your suggestions to the Executive Committee, through me, to fix the time of holding the North American Bee-Keepers' Convention, at Lexington, Ky., on Wednesday and Thursday, Aug. 24 and 25—the week after the American Association for the Advancement of Science meets at Cincinnati, O.

It seems to me that would be a favorable time for holding the Convention, but our Association is so extensive, embracing, as it does, the whole of North America, it is difficult to decide the best time for holding the Convention. I thank you, sir, for the interest you manifest in the Convention, and will be glad to receive suggestions from other Vice Presidents and bee-keepers generally who feel an interest in the matter. The reduction of railroad rates will have much to do with the number attending the meeting. In October the Louisville and Cincinnati Expositions arrange for reduced rates, and members passing through could get the benefit of the reduction. But, as you state, we might be able to get the commutation of railroad fares to extend to the meeting at Lexington. We hope to have a very large attendance, and the most interesting meeting that has ever been held by the bee-keepers of North America.

As soon as the Executive Committee can determine on the time, it will be made known through the bee papers. Meantime, I hope to hear by letters or postal cards from the interested bee-keepers, expressing their preferences, with reasons, for the time of holding the next Convention.

Very truly yours, N. P. ALLEN.

The Semi-Annual meeting of the Champlain Valley Bee-Keepers' Association will be held at Bristol, Addison Co., Vt., May 19, 1881.

T. BROOKINS, Sec.

SELECTIONS FROM OUR LETTER BOX

Italian Bees Superior.—Bees are doing well here this season. Swarming commenced March 30; they are storing honey in boxes, which are half full now. I had 40 colonies last fall and lost none in the winter; and none were even queenless. They are all Italian bees. Native bees are a failure as compared with the Italians, as I have demonstrated during the past 4 years.

B. C. YATES.
Weatherford, Tex., April 3, 1881.

Box Hives no better than Others.—My bees are all dead; they died of cholera. They have died at a very fair rate in the old reliable box hive, so the "I told you so's" have to take a back seat, as the scientific apiarist has not killed his bees this time. W. P. EVRITT.
Davis, Mich., April 5, 1881.

A Little Discouraged.—Nine-tenths of all the bees in this part of Ohio are dead; in fact there are hardly any left. Of those remaining, the greater portion are in box hives, unprotected. What is the cause of that singularity? I had mine packed according to Prof. Cook's theory, and all but a few perished, and they are very weak. All left plenty of honey in the hive, and all had the dysentery. I have about 400 frames of comb, the greater part of which have some honey nicely capped, and I want to save them for future use. 1. How can I protect them from the moth? 2. Should I extract the honey from them? 3. Is there any advantage in feeding weak colonies when there is plenty of honey in the hive? 4. Why do not some of the more successful bee-keepers give to the public, through the BEE JOURNAL, their mode of wintering? I have reason to feel a little discouraged. The JOURNAL is a welcome visitor.

L. Z. LANTZ.
West Liberty, O., April 4, 1881.

[We presume, when a final balance-sheet is struck, you will find the box-hive bees have fared no better, if as well as those in approved hives.

1. By placing them in tight hives, closing the entrances tightly, spreading papers on the top projecting beyond the hives, fitting the covers on nicely, then putting them in a cool room.

2. Yes; we prefer giving them empty, one or two at a time.

3. No; it is injurious. If you wish to stimulate breeding, give each day a little honey and water, in equal parts, at the entrance. A Shuck feeder is very good for this purpose.

4. Nearly every number of the JOURNAL contains letters from successful bee-keepers, giving their methods of wintering.—ED.]

A Confinement of 148 Days.—This has been a most disastrous winter for bees, so far, and the end is not yet. The weather to-day is more like December than spring. Nine-tenths of the bees that were not well protected have died, and the other tenth will probably die if they are not fed. Bees that are well cared for have fared better. I have 3 colonies in the cellar and one on their summer stand, packed in chaff. They had a flight on March 26, after a confinement of 148 days. We had no surplus honey nor increase last year but I look for an abundant yield this season. I am located $\frac{1}{4}$ miles south of a grove of linden of from 1,500 to 2,000 trees, from 6 inches to 3 feet in diameter, will my bees go there for honey? They are blacks and hybrids. I want to Italianize in the spring. I find that nearly all of my neighbor bee-keepers that do not take a bee paper are the heaviest losers in bees. Success to the Weekly BEE JOURNAL.

L. W. WREN.
West Branch, Iowa, April 4, 1881.

Spring Prospects.—We are having a late and backward spring. Bees are housed up nearly all the time, and are making slow progress. Plums and peaches are nearly a month later in blooming than usual, and so far have been but little benefit to the bees. Cool weather still refuses to let loose, despite the prophets, but hope points just ahead to genial springtime. The Weekly is a success. "Onward" be its motto.

S. D. MCLEAN.
Culleoka, Tenn., April 1, 1881.

Cold in Kentucky.—This is a very cold day for April 1st. Snow has been falling for 48 hours, but melting as it fell. The ground is now frozen and the wind is blowing strong from the north. Bees are in bad condition except where well protected. Mine are all right yet with their chaff cushions, and have plenty of stores. I lost but 1 colony out of 40, and that was a late artificial swarm. I hope for a good honey yield and a prosperous season. Fruit blossoms are ready to open the first warm days, and the white clover is very promising.

N. P. ALLEN.
Smith's Grove, Ky., April 1, 1881.

Loss of Bees.—This has been a very hard winter on bees in this locality. Mine were confined to their hives from October 16 till March 13. The weather is still cold and winter holds on. I think about $\frac{1}{2}$ will be lost by April 15.

GEO. GARLICK.
Warsaw, Ont., April 1, 1881.

Bees in Fair Condition.—Bees in this vicinity that were wintered out-of-doors are under snow banks some 8 feet deep, and still the snow is coming. The banks cover the tops of the fences in many places and we can drive over a 4-board fence without taking down the fence. My bees have the dysentery, but I gave them a flight on March 18. I left 50 colonies out all night as it was a fair day, but the morning of the 19th soon turned out to be one of the worst blizzards we have had this winter. I succeeded in putting my bees all back in the cellar by calling up the neighbors to help; it became a perfect gale before we got them all in. They now seem to be ready for another nap. In my bee yard the snow is from 3 to 8 ft. deep, a splendid time to trim fruit trees as we need no ladder.

D. G. WEBSTER.
Parks Corners, Ill., April 4, 1881.

Safely Wintered.—My bees are in excellent condition this spring, considering the severe winter they have passed through. Last fall I had 8 colonies, all hybrids. I prepared 5 for winter by reducing to 3 and 4 frames each, with division boards placed on each side of the brood nest; each hive having about 10 or 12 lbs. of honey; size of frame $11\frac{1}{4} \times 11\frac{1}{2}$; they are now in good condition with brood in all stages. The 3 colonies I had in 2 story hives I prepared for winter by taking off the top sections and leaving the bottom section with the 8 frames, full of honey (about 35 lbs.) in each hive. One warm day about the middle of January, when other colonies were lively and flying, they did not make any show. Upon examination I found every bee dead and not a drop of honey in either of the 3 hives. I was rather surprised at this loss, and examined one of them and found that they had plenty of stores and very few dead bees; all wintered on their summer stands. I do not use chaff-packing or lime (the lime is new to me) as I can have good results without them, and it is a big job to prepare a number of colonies for winter. With the hive properly adjusted with division boards inside, a space of 6 or 8 inches from the division board to end of hive, a thick cotton quilt on top of frames to absorb moisture and a few thicknesses of paper on the quilt to prevent the escape of heat, they are in an excellent condition to stand a zero freeze, as my 5 colonies have proven to be at this time. The 3 that starved had more space and honey than they required, and consumed honey to keep warm on the same principle that a small stove requires a great amount of wood to keep a large room warm. The great loss of bees

this winter seems to be a puzzle to many, but when properly examined is very simple and natural; the bees have died from old age more than anything else, as very few bees were reared last fall. During the months of August, September and October we had very warm, dry weather and no honey in the few flowers that did bloom, and when honey ceases coming into the hive the queen almost stops depositing eggs, even when they have plenty of stores for winter, and the majority of the bees being old, they were in poor condition to pull through a long, cold winter such as we have had. As all old animals require more nourishment to keep up a given temperature than young animals under the same circumstances, and very few young bees being reared during severe cold weather to keep up the colony the natural consequence is death, with plenty of stores around them. These are my ideas on the great loss of bees this winter. Shall be very glad to hear from others on the same subject, as a change of ideas brings out the truth.

J. S. DUNCAN.
Browning, Mo., April 4, 1881.

The Dying and the Dead.—About $\frac{1}{4}$ of all the bees in this county last fall have now gone "where the woodbine twineth," and this month with next will certainly bring this up to $\frac{1}{2}$. I have lost but one in 137 as yet, but am fearful that by the first of June I shall tell a different story as to losses for the whole season.

N. F. CASE.
Glensdale, N. Y., April 4, 1881.

Loss of Bees in Northern Michigan.—I have made some inquiries and have so far to report the loss of 604 out of 933 colonies in this section of the country. This will not fully cover the loss; the present cold weather will reduce the 600 about as much as the "Noble Six Hundred" we read of.

L. C. WHITING.
East Saginaw, Mich., April 5, 1881.

Bees in Middle Tennessee.—I like the Weekly BEE JOURNAL. It has been raining and snowing all day here, in middle Tennessee. Yesterday was a beautiful, pleasant, spring-like day. Peaches and plums are in bloom. Bees were working like beavers; to-day all are frozen up. If we could have 10 warm days our bees would be safe. I have rye-meal, honey and sugar. I put into winter quarters 8 colonies in Langstroth hives; lost only one, which was short of stores and came out in February and ran off. I wintered on the summer stands, sheltered and packed down with cotton seeds and mats; I packed underneath the hives with sawdust. There is only one requisite here in wintering bees and that is to have plenty of stores and to keep them dry. This has been a remarkably hard winter; many of the late swarms in box and gum hives have starved. This is a very trying snap on bees. I saw some apiarist from Indiana here trying to buy up native bees.

I. A. BURROW, M. D.
Santa Fe, Tenn., March 29, 1881.

Losses.—I congratulate the editor on the success of the Weekly. If I get it in the morning I cannot stop till I scan it all over. My pets, I fear, will all die. Out of 33 only 11 survive; one is queenless but strong in bees and honey. My beautiful Italian which I found nearly dead and put in a queenless colony is gone with all in the colony. One I covered with 2 thicknesses of wool carpet did well till March, and died with plenty of honey. We have snow with north winds now. I fear more will be dead when this breaks up. Those I wintered in the shed fared better than those out. Some lose $\frac{1}{2}$; some all.

G. W. ASHBY.
Valley Station, Ky., April 2, 1881.

Upward Ventilation.—As there have been so many conflicting reports in regard to bees wintering the past winter, I thought I would mention a circumstance that came under my observation while at a sale a few days ago. There were 6 colonies of bees in box hives and one in an old Langstroth hive. The colonies had all stood out on the sum-

mer stands without protection during the winter. The surplus boxes had been emptied last fall and returned to the hives, where they were left on all winter, and although they did not fit very closely and the bees had plenty of upward ventilation, the bees were in good condition. It occurred to my mind that there must be more in upward ventilation than many supposed, for some have died around here that were all packed in chaff, and appeared to be in good condition last fall. I am a strong advocate for chaff-packing, but what is the use of chaff-packing if we can get as good results by having plenty of upward ventilation and a vacant chamber above the bees?

J. A. OSBORNE.
Rantoul, Ill., April 6, 1881.

Italians vs. Black Bees.—My bees are mostly blacks and hybrids, and I have lost heavily. I have one colony of Italians which endured the severity of the winter much better than the blacks. I think the Weekly BEE JOURNAL splendid, and am glad that it is a success.

J. A. MCKEE.
Sparta, Ill., March 15, 1881.

Bees in California.—Honey is coming in fast; the bees are working in sections and capping; drones are hatching and flying out. I have kept back swarming by great exertions. I have 20 frames and sections on some, and 2 tiers of sections on others. The bees are building out foundation, and the weather is fine and dry, but the nights are cool. One colony with a hybrid queen had the boxes all capped on the 4th, and has built out several combs of foundation of last year's make. I find that my bees will bite off the bottom and corners to build out drone comb. My colonies are strong in bees and working nicely. A queen 3 years old is the only one I have had superceded. I have grapes and fruit with 60 colonies of bees within a stone's throw; I have observed closely but never found a bee biting the fruit. I had 2 frames of foundation worked out and filled with eggs, pollen and honey in 20 hours.

J. D. ENAS.
Napa, Cal., March 30, 1881.

My Plan of Wintering.—My bees are in fine condition on their summer stands, notwithstanding the very cold winter. I use the Quinby hive. The plan that I have adopted for wintering for the last 3 years is to take off the cap and honey board, put 3 sticks across the frames, then a quilt over the frames, then old carpeting (or some other porous article) and keep warm and dry; after which I place a rough box with from 2 to 4 inches of air-space all around the hive, with an entrance the same as in the hive. In this way I have succeeded for 3 winters with the loss of but one colony. They had a good flight in February and also in March. I shall have to feed some now. Last season was a poor one for honey. There are comparatively but few bees in this vicinity; they have wintered fairly well. I very highly prize the Weekly BEE JOURNAL.

EDEN DAVIS.
Thompson, Conn., April 5, 1881.

Bees in Vermont.—We have had about 90 days of uninterrupted sleighing. Bees here that were properly cared for and put into cellars are, as far as I can learn, in good condition. I had 3 colonies that exhibited signs of dysentery, but had the good fortune to be able to give them a flight early in February, and they are all right now. I hope to come out without loss. During the past two years my average has been about 25 lbs. of extracted honey per colony; this sells readily for 1 shilling per lb., put up in quart fruit jars. Are tin pails a good receptacle for honey? Is not the cheap tinware adulterated with lead? and would not honey put up in such packages be injurious to the health of the consumer?

W. S. CLARK.
Bellows Falls, Vt.

[Tin pails, which can be utilized in the house after the honey is used, make good receptacles. Only soured honey, we think, would be liable to absorb lead poison from adulterated tin.—ED.]

Great Loss of Bees.—Never before in the recollection of bee-keepers have bees become so nearly extinct as now in our vicinity. Last fall no less than 300 colonies of the useful pets decorated the yards of our neighbors. At this date about 292 colonies are no more. Very little attention was given to the little fellows. Out of 30 extra colonies I have but one colony remaining to mourn the loss of their industrious neighbors. E. J. HINSHAW.
Lynn, Ind., April 1, 1881.

Bees Confined 134 Days.—I am wintering 170 colonies of bees. The greater part of them are in the cellar and are doing well. They have not seen daylight for 134 days, and are not likely to for several days to come, as it has been snowing steadily for the last 60 hours. Sleighing is pretty fair here and the snow is at least 20 inches deep where not drifted, and the drifts are from 2 to 6 feet high. What is the correct pronunciation of the name Dzierzon?
S. F. NEWMAN.
Norwalk, O., March 31, 1881.

[It is pronounced thus: "Tseerson."
—Ed.]

Colonies Strong.—I put 59 colonies of bees in the cellar; 4 of which were made late of nuclei; I lost 2 of them; the balance consumed about 5 lbs. per colony while in the cellar. They are now stronger than ever before at this time of the year. MOLLIE O. LARGE.
Millersville, March 29, 1881.

Shall I Transfer or Drive Them?—I bought at a sale a few days ago 2 colonies of black bees, one in an old gum and the other in an old box hive. The combs look very black and old. Which is the better plan, to transfer, or drive into a new hive filled with foundation, and Italianize in either case? Please answer in next issue of BEE JOURNAL.
W. R. YOUNG.
Myersville, Md., March 29, 1881.

[Transfer, by all means. You will need the brood in the old combs (which would be lost in the case of driving) as fast as hatched to nurse the Italian brood, it being the especial province of the younger bees to do the nursing and other drudge work in the hive. It is an easy matter, as the season advances, to work the old combs out, by putting in a sheet of foundation every few days in the centre of the brood nest, crowding the old combs to the outside, and lifting out as fast as emptied of brood.—Ed.]

Heavy Loss in Bees.—Bees are nearly all dead in this locality; one who had 24 colonies last fall has 3 left; another with 10, has 2; another with 30, has 5 or 6; while others having 1 to 10, are all dead. I have 2 out of 20, but cannot do without the Weekly BEE JOURNAL. "Long may it live."
M. F. EASTMAN.
Queensville, Ind., April 2, 1881.

Bees in Good Condition.—I am well pleased with the Weekly BEE JOURNAL. My bees have come through the winter in good condition. I had them packed in chaff on the summer stands. Bees left unprotected are, I think, about half dead in this locality. I lost all my bees 2 years ago, by wintering without protection. After losing all I bought more and wintered in the cellar with success. I like packing in chaff the best; they come through in better condition. Success to the AMERICAN BEE JOURNAL.
Boswell, Ind. J. H. MCDANIEL.

Bees Confined 6 Months.—March bade us "adieu" with a regular "howler" from the northwest, and 10° below zero. Snow in the timber is about 2 feet deep; bees have been confined since the middle of Oct.; ice in the lake is 3 feet thick. The way things now look bees will be confined to their hives 6 months. What do they think of that "down south" complaining of long confinement; while their bees are at work on the clover and fruit blossoms, up here they are as still as

death? This winter has been a terror, and if the Palestine bees are proof against death from cold, I want them. I do not wish to complain, for my bees, 76 colonies, are all right, and bright as you wish to see. The hives are clean and they show no signs of disease. I winter in-doors, in a house made of logs arched over and covered with earth; it has a door in one end and ventilators; it is the best thing I have tried. When I get them out for good I will report their condition, etc. M. S. SNOW.
Osakis, Minn., April 1, 1881.

Sawdust for Wintering.—Thus far I have lost nearly 1/2 of my bees. The greater part were packed in chaff and cut straw, in November; the remainder were put in a sawdust cellar and taken out on warm days this month and packed. For a winter like this a cellar for winter and packing for spring is, in my opinion, the best; but deliver me from bees in a sawdust cellar in a warm winter. JOEL GULICK.
St. Charles, Mich., March 30, 1881.

Wants the Plan.—I should be glad if Mr. Robinson, of Pewamo, Mich., would give his plan in detail for wintering queens on one comb. I think it of great importance. I am much pleased with the Weekly BEE JOURNAL, and wish it success.
GEO. REYNOLDS.
St. Neots, England, March 15, 1881.

[Will Mr. Robinson please comply with this request?—Ed.]

Bees Dead.—Most of the bees around here are dead. I have lost 4 colonies out of 14, and I expect to lose 1 or 2 more, for it is quite cold yet. I think the BEE JOURNAL the best exponent of scientific bee-culture in America.
L. H. WESTPHAL.
Brighton, Mich., March 31, 1881.

A Strange Occurrence.—I have a curious circumstance to relate, and would like to know if it is of common occurrence. Last spring I had a queenless colony, but with a queen cell nearly ready to cap over. One noon I found an adjoining colony about to swarm, and cutting out the queen cell. I took it in the house, broke it open, and found a fully-matured queen, smart and lively. I conceived the idea of giving it to the queenless colony, and for that purpose took a small mug, put the queen into it with a few drops of honey, put two thicknesses of common mosquito cloth over the mug, a stick through the handle, and hung it in the queenless hive. Returning at 4 o'clock, I opened the hive and found the bees had liberated the queen, had manufactured about two square inches of comb on the stick that the mug hung on, and in nearly every cell was from 1 to 3 eggs, and the queen not out of her cell to exceed 5 hours. Is this not a peculiar instance?
J. H. COOK.
Parsons, Kans., April 1, 1881.

[It is too peculiar to be possible. The bees may have swarmed from the hive alongside and taken possession of the one in which you confined the queen, or they may have had a queen when you put her in, or there may have been a fertile worker—anything is quite as probable as that a queen would be laying eggs within five hours after emerging from the cell.—Ed.]

Chaff Packing Ahead.—Last fall I had 10 colonies of bees (4 in chaff hives and 6 in simplicity) all strong. The first Sunday in December was pleasant and the bees had a jollification, after which there was not a day that they could safely leave the hive until March 15 and 16, when they had a good flight, which they very much needed. I have 7 left; 4 strong (in chaff hives) with brood; 2 comparatively strong, and one rather weak, being what was left of 2 colonies that had dysentery. All wintered on the summer stands. I think chaff hives would have saved this loss. The ground is now bare and frozen and we have had cold northwest winds for 3 days. As far as I have been able to learn, the

loss has not been heavy in this section. The Weekly is a positive necessity. May it "live long and prosper."
P. F. TWITCHELL.

Andover, O., March 28, 1881.

Bees and Grapes.—I noticed an article in the BEE JOURNAL for March 2d, page 68, in regard to bees and grapes. I have had both for over 10 years in one yard; the bees never troubled my grapes, and I have the Isabella, Concord, Delaware and Augustine, and 40 colonies of bees; bees are not over 10 rods from grapes. My bees are in the cellar yet, but do not yet know how they will come through.
THOS. PIERCE.

Gansevoort, N. Y., March 21, 1881.

Chaff Did It.—I commenced the spring of 1880 with 8 colonies of bees. I obtained 400 lbs. of honey, mostly extracted, and increased to 28 colonies. I sold one last fall and packed 27 in chaff; they are all alive up to date, 5 are rather weak, the balance are in good condition. About 1/2 of the bees in this part of the country are dead.
C. H. WRIGHT.

Conneautville, Pa., April 2, 1881.

Are Bees Taxable?—I. I have a good deal of honey in old comb taken from box hives, with considerable bee-bread, and this honey is quite bitter in flavor—will it do to place over the brood frames to feed with? Some of the honey I think is sour.

2. Can I use old strained honey that has pollen in it to stimulate the queens?

3. I had bees starve with sugar candy over the cluster, but not a cell of honey. The candy was very hard—was that the reason they could not eat it?

4. Can bees be taxed the same as other property?
A. G. MAYHEW.

[1. The bitter honey will answer to feed over the frames. If soured, feed outside the hives, when the bees are flying freely, thus leaving it optional with them to take it or let it alone.

2. Yes.

3. Perhaps it was.

4. Yes, as other personal property. The statutes in different States vary somewhat in regard to taxable personal property.—Ed.]

Bees Gone to Rest.—My bees did well last season, considering the small supply of nectar yielded by the flowers. White clover and basswood, from whence we get our greatest supply, was a total failure, and our bees did not get much until fall. Our fall crop was fair. I started in the spring with 14 colonies, increased to 22 and obtained 700 lbs. of comb honey in nice shape. I packed part of my bees in chaff and the rest I covered with straw to the depth of 2 feet, except on the fronts, which I covered first with a board set slanting against the hive, then a little straw over that. However, they were not prepared in this way until the last of November, with the thermometer at 20° above zero, owing to my having been away to school for 3 months. They were very strong and had plenty of honey as near as I could ascertain. But alas! when I examined them on March 5, I found all quiet, after having been confined for about 125 days; there were none short of stores, but the hives were daubed badly, showing that long confinement was the principal cause. Many lost 1/2; some 3/4, and others all. I think 1/2 of the bees in this section have died, but I am not discouraged. I shall start anew if there are any bees to be had. Mr. Editor, do you not think the reason for bees not swarming last season was on account of a forewarning of this cold winter? Success to the Weekly BEE JOURNAL.
A. B. LOOMIS.
Carson City, Mich., March 4, 1881.

[No; bees have no forewarnings any more than has humanity. The conditions were not right for swarming, either from want of honey-flow, or from an absence of sealed brood, threatening crowded colonies in the hive.—Ed.]

Honey As Food.—We have just been baking honey ginger snaps, "a la Newman," as given in "Honey as Food and Medicine." We are puzzled to know how one person can embody all the requisites for an Editor, Doctor and Cook, and a Minister, too, by the way he quotes Scripture in this valuable little work. Perhaps he has a help-meet—as the Irishman says, "sure and hasn't he a wife?" Honey producers should always place honey before their guests, take it to fairs, ministers' donations, festivals, sociables, excursions, old settlers' picnics, etc., use it in the dressing and canning of fruits, and teach the people, by precept and example, that honey is good. Mrs. L. HARRISON.
Peoria, Ill., April 4, 1881.

First Swarm.—Last season was very severe on bees in our State. We had rain from April until December 31, almost every day. The moth worm and the scarcity of honey in the flowers caused us to lose 25 out of 38 colonies. Our bees have been working well since the first of this month. We had a natural swarm this morning from hybrids; we put them in a Langstroth hive; they appear to be all right. Success to your Weekly. W. R. & F. P. THOMPSON.
New Iberia, La., March 31, 1881.

Took The Bees Out.—I have put my bees out on their summer stands. I lost 8 out of 46. I had them in a room above ground; they are out of honey now, so I must feed them, though it is cold and I fear it will injure the bees some. A word to all: see if your bees have enough honey. FAYETTE LEE.
Cokato, Minn., April 1, 1881.

The Southwestern Wisconsin Bee-Keepers' Association will meet at the residence of W. B. Wallis, at Darling-ton, Wednesday, May 11, 1881, at 10 a. m.

There will be an opportunity given for questions and answers. Interesting papers will be read, among which may be mentioned:
Location of Apiary, by E. France.
Implements of the Apiary, by R. D. Wilson.
Feeding Extracted Honey to Produce Comb Honey, by Dr. C. Abraham.
Foundation, and its Advantages, by D. R. Sylvester.
Bee Forage, by H. Gilmore.
Preparation for Winter, by George Fox.
Wintering Bees, by Reese Powell.
Advantage in Preparing Papers, by E. France.
Profitable Bee-keeping, by E. Pike.
Bee-keeping, will it pay? by N. E. France.
The Price Essay of the N. E. Convention, on How to make the Apiary the most Profitable, by George W. House, of Fayetteville, N. Y.
A cordial invitation is given to all.
N. E. FRANCE, Sec., Platteville, Wis.

The Michigan Bee-Keepers' Association will convene in Pioneer Rooms of the State Capitol at Lansing, May 6. The following is the programme:

Regular order of business.
Annual address by Pres. W. J. Ashworth.
Address by T. G. Newman, editor of American Bee Journal; subject, Rise, Progress, Present Condition and Future Prospects of American Apiculture.
Essay—Profitable extent of bee-keeping, by James Heddon, Dowagiac.
Essay—Requisites of an Apiary, by H. A. Burch, South Haven.
Some important facts in bee-keeping, by Prof. A. J. Cook, Michigan Agricultural College.
Discussions and remarks.
Examination of exhibits.
All exhibitors of supplies are requested to send samples to the Secretary, with prices and descriptions attached, and all transportation charges must be prepaid by the exhibitors. GEO. L. PERRY, Sec.

Programme of the Northwestern Bee-Keepers' Union, to be held at Hastings, Minn., May 17, 1881:

1.—Address of Welcome, by J. N. Searla.
2.—Reports of committees.
3.—Reports from all—number, kind and condition of bees.
4.—A paper by Pres. A. Tidball, on honey-produce plants and flowers.
5.—A paper by Dr. F. Barton, of St. Paul, on honey as food and medicine.
6.—Apiary culture and our fairs, by Hon. William Avery, of St. Croix Falls, Wis.
7.—A paper on sales of honey, by F. B. Dorothy, of Taylor's Falls, Minn.
8.—A paper on wintering bees, by L. Day, of Farmington.
9.—Progressive bee-culture, by J. G. Teter.
The above subjects will be open for discussion. In addition to the above, the following subjects are suggested:
1.—Essential properties of a good bee hive.
2.—How to prevent and cure foul brood.
3.—How to prevent spring dwindling.
4.—Comb Foundation, with dividing and natural swarming.
5.—Appointment of committees.
6.—Election of officers. Adjournment.
All bee-keepers are cordially invited. Entertainment free. F. B. DOROTHY, Sec.

The North Western Wisconsin Bee-keepers Association will meet at Germania Hall, LaCrosse, Wis., on Tuesday, May 10, at 10 a. m. All interested in bee-keeping are requested to be present. L. H. PAMMEL, Jr., Sec.

Books for Bee-Keepers.



RATES FOR ADVERTISING.

A line will contain about eight words; fourteen lines will occupy one inch of space.

One to three weeks, each insertion,	20 cts. per line.
Four " " " "	15 " "
Eight " " " "	10 " "
Thirteen " " " "	8 " "
Twenty-six " " " "	5 " "
Fifty-two " " " "	3 " "

Special Notices, 50 cents per line.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

Transient Advertisements payable in advance. Yearly Contracts payable quarterly, in advance. THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium for reliable dealers. Cases of real imposition will be exposed.

THOMAS G. NEWMAN,
974 West Madison Street, Chicago, Ill.

Contents of this Number.

Correspondence:

The Clover Experiments	113
Poplar-Engraving of	113
Stingless Bees—Mellipona, etc.	114
Have we a Reliable Test for Honey?	114
Side-Storing for Surplus Honey	115
The Discharge of Feces in the Hive	114

Conventions:

North-Western Wisconsin	114
Different Races of Bees	114
Best Methods of Wintering Bees	114
Upward Ventilation in Winter	114
Food Consumed by Bees in Winter	115
Mistakes of and Hints to Beginners	115
Wintering on Grape Sugar	115
Best Methods of Swarming	115
When to Divide Colonies	115
Melting Combs and Use of Foundation	115
Division Boards and Surplus Honey	115
Basswood in Wisconsin	115
Wintering Bees Successfully	115
How to Prepare for Winter	115
Winter Repository	115
Storing in Winter Quarters	115
Winter Management	115
How Long should Bees be Housed?	115

Editorial:

The Austrian Society	116
Uniting Colonies in Early Spring	116
Conventions and their Mission	116
Wisconsin Law against Adulteration	116
The National Convention	116

Selections from Our Letter Box:

Italian Bees Superior	117
Box Hives no Better than Others	117
A Little Discouraged	117
A Confinement of 148 Days	117
Spring Prospects	117
Cold in Kentucky	117
Safely Wintered	117
Loss of Bees in Northern Michigan	117
Loss of Bees	117
Bees in Fair Condition	117
The Dying and The Dead	117
Bees in Middle Tennessee	117
Losses	117
My Plan of Wintering	117
Bees in California	117
Upward Ventilation	117
Italians vs. Black Bees	117
Bees in Vermont	117
Bees Confined 134 Days	118
Colonies Strong	118
Shall Bees be Transferred or Driven?	118
Heavy Loss in Bees	118
Bees in Good Condition	118
Bees Confined 6 Months	118
Sawdust for Wintering	118
First Swarm	118
Wants the Plan	118
Bees Dead	118
A Strange Occurrence	118
Chaff Packing Ahead	118
Bees and Grapes	118
Chaff Did It	118
Took the Bees Out	118
Are Bees Taxable?	118
Bees Gone to Rest	118
Honey as Food	118
Great Loss of Bees	118

The next meeting of the N. W. Illinois and S. W. Wisconsin Bee-Keepers' Association, will be held at H. W. Lee's, 2 miles n.w. of Pecatonica, Winnebago county, Ill., on the 17th of May, 1881. J. STEWART, Sec.

The Texas Bee-Keepers' Association will hold their third annual Convention at Judge W. H. Andrews' apiary, in McKinney, Collin Co., Texas, on the 12th and 13th days of May, 1881. WM. R. HOWARD, Sec., Kingston, Hunt Co., Texas.

FLAT-BOTTOM COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free. J. VAN DEUSEN & SONS, Sole Manufacturers, 1117 Sprout Brook, Mont. Co., N. Y.

THE Headquarters in the South

for ITALIAN and CYPRIAN BEES and QUEEN FOUNDATION and APIARIAN SUPPLIES. If you want Early Queens, from stock selected for their most desirable qualities, or want Imported Queens, Dunham Foundation in large or small quantities, or Apiarian supplies of any kind, at moderate prices, send for my new Illustrated Price List. Pure Beeswax worked on shares and bought for cash. Address, Dr. J. P. H. BROWN, Augusta, Ga.

SECTIONS AND HIVES.

James Farnbrook has just received a patent on his Machine for Scoring Honey Box Sections, dated March 20, 1881, No. of Patent, 239,476. He has not sold any shop rights on this machine, nor does he intend to; therefore, any one using a machine to make the One-Piece Section are infringing. We will make the "Boss" Section, any size up to 500, for \$5.00 per 1,000. Material for Langstroth hive 50c.

JAMES FARNBROOK & CO.

Watertown, Jeff. Co., Wis., April 2, 1881. 15wt

Bees for Sale.

Several friends in the South are supplying me with quite a lot of bees, which I shall sell at reasonable rates. They are pure Italian, Hybrids and Blacks, in Langstroth hives, box hives and log gums. First shipment arrived to-day. For further particulars address,

CHAS. F. MUTH.

Cincinnati, O., April 5, 1881. 15wt

WANTED—You to send for our Circular and Price list of American-Italian Queens. Address, JOS. M. BROOKS & BROS., 12w6m Columbus, Ind.

Rev. A. SALISBURY,

Camargo, Douglas Co., N. Y.

Warranted Italian Queens, \$1.00; Tested Italian Queens, \$2.00; Cyprian Queens, \$2.00; Tested Cyprian Queens, \$4.00; 1 frame Nucleus, Italian, \$4.00; 1 frame Nucleus, Cyprian, \$5.00; Colony of Italian, 5 frames, \$8.00; Colony of Cyprian, 5 frames, \$10.00. Wax worked 10c. per lb. Pure Comb Foundation, on Dunham Machine, 25 lbs. or over, 35c. per lb. Send for Circular. 15wt

DON'T BUY SUPPLIES

Till you have read my new price list for the spring trade. Wax is cheaper now, so I can sell you a fine article of Comb Foundation cheap, and made on the best machine. Italian and Cyprian Queens, Bees, Hives, Sections, etc. Price List free to all.

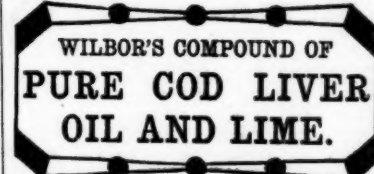
J. V. CALDWELL,

12w6m Cambridge, Henry Co., Ill.

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation cheap and made on the All Presses warranted to give satisfaction. Send for Catalogue and Samples. 15wt

D. S. GIVEN, Hoopeson, Ill.



To One and All—Are you suffering from a Cough, Cold, Asthma, Bronchitis, or any of the various pulmonary troubles that so often end in Consumption? If so, use "Wilbor's Pure Cod-Liver Oil and Lime," a safe and sure remedy. This is no quack preparation, but is regularly prescribed by the medical faculty. Manufactured only by A. B. WILBOR, Chemist, Boston. Sold by all druggists.

13 EGGS from fine Plymouth Rock or W. Leghorn or Queens of Bee. J. H. THORNBURG, Winchester, Randolph Co., Ind. 14wt3

NOW READY,

Our New Circular and Price List for 1881. We have something new for every bee-keeper. Remember, we are largely engaged in practical bee-keeping, and know what supplies are of practical value in an apiary. You should see a description of our feeder, you will want one. Our new

Double-Draft Smoker

is perfection. See what one of the most practical and best informed bee-keepers in the country thinks of it: "Since your great improvement in Smokers, as regards the double-draft, you undoubtedly have the inside track of all the others in the market. This, with the superior workmanship and materials used, should place your Smoker at the head of the list, and secure for it a favorable patronage for 1881. G. M. DOOLITTLE."

Price of Smokers, by mail, \$1.50 and \$1.75.

OUR BOOK,

QUINBY'S NEW BEE-KEEPING

is pronounced the most practical work published. Price, by mail, \$1.50. We furnish everything used in advanced bee-culture. Send for Illustrated Circular to

L. C. ROOT & BRO.,

12sm1f Mohawk, N. Y.

THE BRITISH BEE JOURNAL,

AND BEE-KEEPER'S ADVISER.

The British Bee Journal is published monthly at \$1.75, and contains the best practical information for the time being, showing what to do, and when and how to do it. C. N. ARBOTT, Bee Master, School of Apiculture, Fairbairn, Southall, London.

Agents: Furnish pleasant, profitable employment. Local Printing House, Silver Creek, N. Y. 9wt



I HAVE NOW OVER

300 COLONIES

of Pure Italian Bees, in good condition, in 10 frame Langstroth hives. Orders for

ITALIAN QUEENS,

Nuclei and Full Colonies,

are now being booked and will be filled in rotation as received, commencing about June 1st, at the following prices:

Tested Queens, each	\$2 50
" " per half-dozen	13 50
1 frame Nucleus, with Tested Queen	5 00
2 " " " " " "	5 50
3 " " " " " "	6 00
4 " " " " " "	6 50
Full Colonies, each	12 00
" " in lots of 5, each	10 00
" " " " 10, each	9 00

I will use all possible care in preparing the above for shipment, but cannot guarantee safe arrival, except on queens any distance less than 1,000 miles.

ALSO

100 COLONIES

OF

BLACK AND HYBRID BEES,

in Langstroth hives, in quantities of not less than 5 colonies at \$9.00 each, which I will ship direct from the South, at any time after April 15th.

Also, 200 Colonies of Native Bees,

in Box Hives, delivered on Mississippi River Steamboat any time after April 15th, in lots of 10 or more, at \$6.00 each.

The Colonies of Hybrids and Natives are very strong in bees reared this spring, and combs well filled with brood. They can be transferred or divided by May 1st, and increased in time for white clover and basswood surplus.

ALFRED H. NEWMAN,

172 West Madison St., CHICAGO, ILL.

THE ORIGINAL

Patented Jan. 9, 1878, and May, 1879; Re-issued July 9, 1878.

If you buy a Bingham Smoker, or a Bingham & Hetherington Honey Knife you are sure of the best and cheapest, and not liable to prosecution for their use and sale. The largest bee-keepers use them exclusively. Twenty thousand in use—not one ever returned a letter of complaint received. Our original patent Smokers and Honey Knives were the only ones on exhibition at the last National Bee-keepers' Convention, 1880. Time sifts the wheat from the chaff. Pretensions are short-lived.

The Large and Extra Standard have extra wide shields to prevent burning the fingers and belching. A real improvement. Send postal card for testimonials.

Bingham & Hetherington Honey Knife... 2 in., \$1 00
Large Bingham Smoker... 24 " 1 50
Extra Standard Bingham Smoker... 2 " 1 25
Plain Standard Bingham Smoker... 2 " 1 00
Little Wonder Bingham Smoker... 14 " 75

If to be sent by mail, or singly by express, add 25c. each, to prepay postage or express charges.

To sell again, apply for dozen or half-dozen rates. Address,

BINGHAM & HETHERINGTON,

9wtf ABBONIA, MICH.

ITALIAN QUEENS, Full Colonies, Nuclei and Bee Hives specialties. Our new Illustrated Catalogue of Bees, Supplies, Fine Poultry, Small Fruits, &c. Free. Send for it and save money. J. T. SCOTT & BRO., Crawfish Springs, Ga. 2w32x

It will Pay you

To read our forty page Catalogue of Apiarian Supplies. It gives the latest information about the best appliances and methods pertaining to

Profitable Bee Culture

Sent free to all who send us their names and addresses, plainly written, upon a postal card. Address

H. A. BURCH & CO.,

9wtf South Haven, Mich.

EVERY BEE-KEEPER

Wanting anything in the line of Apiarian Supplies should send for my Descriptive Circular. Sent free. Address, F. A. SNELL, Milledgeville, Carroll Co., Ill. 13wt4

Florida Land--640 Acres.

CHEAP FOR CASH.

DESCRIPTION.—Sec. 4, township 7, south range west, Franklin county, Florida, situated about 30 miles south of the Georgia line, 25 miles west of the city of Tallahassee, the capital of the State, and about 25 miles northeast of the city of Apalachicola, a seaport on the Gulf of Mexico, and within 2 sections (5 and 6) of the Apalachicola river; the soil is a rich, sandy loam, covered with timber.

It was conveyed on Dec. 31st, 1875, by Col. Alexander McDohald, who owned 6 sections, including the above, to J. M. Murphy, for \$3,200, and on Sept. 5th, 1877, by him conveyed to the undersigned for \$5,000. The title is perfect, and it is unincumbered, as shown by an abstract from the records of the county, duly attested by the County Clerk; the taxes are all paid and the receipts are in my possession.

I will sell the above at a bargain for cash, or trade for a small farm, or other desirable property. An offer for it is respectfully solicited. Address,

THOMAS G. NEWMAN,

974 West Madison Street, CHICAGO, ILL.



The Bee-Keepers' Guide;

OR, MANUAL OF THE APIARY,

By A. J. COOK,

Professor of Entomology in the Michigan State Agricultural College.

286 Pages; 112 Fine Illustrations.

PRICE.—Bound in cloth, \$1.25; in paper cover, \$1.00, by mail prepaid. For sale by

THOMAS G. NEWMAN,

974 West Madison Street, Chicago, Ill.

PARKER'S GINGER TONIC

Ginger, Buchu, Nandake, Stillingsia and many other of the best medicines known are combined so skillfully in PARKER'S GINGER TONIC as to make it the greatest Blood Purifier and the Best Health and Strength Restorer ever used.

It cures Dyspepsia, Rheumatism, Neuralgia, Sleeplessness, and all diseases of the Stomach, Bowels, Lungs, Liver, Kidneys, Urinary Organs, and all Female Complaints.

If you are wasting away with Consumption or any disease, use the Tonic to-day. No matter what your symptoms may be, it will surely help you. Remember! This Tonic cures drunkenness, is the Best Family Medicine ever made, entirely different from Bitters, Ginger Preparations and other Tonics, and combines the best curative properties of all. Buy a 50c. bottle of your druggist. None genuine without our signature on outside wrapper. Hiscox & Co., Chemists, New York.

PARKER'S HAIR BALM The best and most economical Hair Dressing

65 ENGRAVINGS.

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,

974 West Madison Street, CHICAGO, ILL.

THE CANADIAN FARMER

THE ONLY

Agricultural Weekly

PUBLISHED IN THE

DOMINION OF CANADA.

This practical journal is now in its Third Year, and meeting with immense success. The low price of its subscription (\$1.00 per year) in its new and improved form (16 pages 13x10 1/2, folded and pasted) makes it very popular. Its editors are all practical men. It is the Best Advertising Medium in Canada. Sample copies sent free to any address.

11w28x N. B. COLCOCK, Welland, Ont.

FREE TO ALL

OUR new Illustrated Plant and Seed Catalogue of 80 pages, containing descriptions and Prices of best varieties of Plants, Fruits, Seeds, Bulbs, etc. in cultivation, and a Colored Plate of our NEW DOUBLE WHITE ROYALTY will be mailed upon the receipt of a three-cent stamp for postage. Special Price-list of House Plants. Goods guaranteed first quality. Liberal offers to growers up of choice. Wholesale & Retail. N. B. COLCOCK, Welland, Ont.

